

Application No. 09/995,483

Amendment Date August 15, 2003

Reply to Office Action of April 15, 2003

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B 2. (Amended) A bottle cap as recited in claim 1  
[comprising,] wherein at least one slot is formed across all the  
ridges.

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B 8. (Amended) A bottle cap comprising:  
a top portion having an inner surface;  
an annular wall extending from the top portion; and  
a groove formed on the inner surface of the top portion,  
said groove extending chordwise from a first point adjacent a  
first location on the annular wall to a second point adjacent a  
second location different from the first location on the annular  
wall.

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18. (Twice Amended) A vented bottle cap system  
comprising:

a bottle having a neck having a rim defining a mouth  
and threads formed on the neck outer surface;

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B a cap having a top portion having an inner surface and  
an annular wall extending from the top portion, the annular wall  
having threads formed on its inner surface for threading onto  
the threads formed on the bottle neck, wherein when the cap is  
threaded onto the bottle neck a gas path is formed between the  
outer surface of the bottle neck and the inner surface of the  
annular wall; and

a groove formed on the inner surface of the top  
portion wherein when the cap is threaded onto the bottle neck,  
the groove extends [outwardly] beyond two locations of the rim  
of the bottle neck providing a pathway for gas generated in the

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B bottle to escape across the bottle neck mouth and through the gas path.

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22. (Amended) A method for venting gases generated in a bottle having a rim defining a mouth and containing a liquid, the method comprising [the steps of]:

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B providing a cap having a top portion, a plurality of circular ridges formed on an inner surface of the top portion and a slot formed across each of said plurality of ridges; and

torquing the cap on the bottle causing the plurality of ridges to sit on the rim, wherein the plurality of slots provide a pathway for the venting of gases.

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24. (Amended) A method for venting gases generated in a bottle having a rim defining a mouth and containing a liquid the method comprising [the steps]:

providing a cap having a top portion and a groove formed on an inner surface of the top portion; and

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B torquing the cap on the bottle causing the inner surface of the top portion to sit on the rim, wherein the groove extends outwardly beyond two locations of the rim and provides a pathway for the venting of gases.

25. (Amended) A method as recited in claim 24 further comprising [the steps of]:

forcing liquid in the groove; and

solidifying the liquid to block the pathway through the groove.

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26. (Amended) A vented bottle cap system comprising:

a bottle having a neck having a rim defining a mouth and threads formed on the neck outer surface;

135 a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck, wherein when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a disc made of a material being at least [semi hard] semi-hard fitted over the top portion inner surface, the disc having a first surface opposite a second surface, wherein the first surface faces the top portion inner surface;

a circular ridge formed on the second surface of the disc; and

a slot formed across the ridge, wherein when the cap is threaded onto the bottle neck, the ridge sits on the bottle neck rim and the slot forms a pathway for gas generated in the bottle to escape across the bottle neck rim and through the gas path.

31. (Amended) A vented bottle cap system comprising:

a bottle having a neck having a rim defining a mouth and having threads formed on the bottle neck outer surface;

136 a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck outer surface, wherein

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when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a disc made of a material being at least [semi hard] semi-hard fitted over the top portion inner surface, the disc having a first surface opposite a second surface, wherein the first surface faces the top portion inner surface; and

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P a first set of parallel grooves and a second set of parallel grooves formed on the second surface of the disc, wherein grooves of the first set intersect grooves of the second set,

wherein when the cap is threaded onto the bottle neck, the grooves extend radially beyond the rim of the bottle neck providing pathways for gas generated in the bottle to escape across the bottle neck mouth.

32. (Amended) A vented bottle cap system comprising:

a bottle having a neck having a rim defining a mouth and threads formed on the neck outer surface;

a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck outer surface, wherein when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a disc made from a material being at least [semi hard] semi-hard fitted over the top portion inner surface, the disc

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having a circumferential edge and a first surface opposite a second surface, wherein the first surface faces the top portion inner surface;

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B a gap between the annular wall and the circumferential edge;

an opening formed through the thickness of the disc, the opening located within the bottle mouth when the cap is threaded onto the bottle neck;

a circular ridge formed on the first surface of the disc; and

a slot formed across the ridge, wherein when the cap is threaded onto the bottle neck, the ridge is located over the bottle neck rim and the opening and slot form a pathway for gas generated in the bottle to escape across the bottle neck and through the gas path.

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37. (Amended) A vented bottle cap system comprising:

a bottle having a neck having a rim defining a mouth [and threads formed on the neck outer surface];

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B a cap having a top portion having an inner surface and an annular wall extending from the top portion, [the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck,] wherein when the cap is [threaded onto] capping the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a venting member having an annular section [having a central] defining an opening and made of a material being at

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least [semi hard] semi-hard, the annular section having a first surface opposite a second surface and sandwiched between the cap inner surface and the rim wherein the first surface faces the cap top portion inner surface;

a circular ridge formed on the first surface of the annular section; and

a slot formed across the ridge, wherein when the cap is [threaded onto] capping the bottle neck, the slot forms a pathway for gas generated in the bottle to escape through the opening and across the bottle neck rim and through the gas path.

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40. (Twice Amended) A vented bottle cap system as recited in claim 37 [therein] wherein the [insert] venting member is made from plastic.

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43. (Amended) An insert having an annular section for use with a cap for capping a bottle having a rim defining a bottle mouth, the insert allowing for the venting of gases generated in a bottle when the cap is capping the bottle, the annular section defining an opening and comprising:

a first surface opposite a second surface; and

a groove formed on the first surface and extending from the opening, wherein the groove extends to an exterior of the rim when the cap is capping the bottle, and wherein the opening extends from the first surface to the second surface.

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44. (Amended) An insert as recited in claim 43 wherein when the cap is capping the bottle, the groove extends beyond two locations on the rim.

47. (Amended) An insert having an annular section for use with cap for capping a bottle having a rim defining a bottle mouth, the insert allowing for the venting of gases generated in a bottle when the cap is capping the bottle, the annular section defining an opening and comprising:

a first surface opposite a second surface; and

a groove formed on the first surface, wherein when the cap is capping the bottle, the groove extends beyond two locations on the rim, and wherein the opening extends through the insert.

50. (Amended) A vented bottle cap system comprising:

a bottle having a neck having a rim defining a mouth;

a cap having a top portion having an inner surface and an annular wall extending from the top portion, wherein when the cap is capping the bottle neck a gas path is formed between outer surface of the bottle neck and the inner surface of the annular wall;

a venting member having an annular section defining an opening and made of a material being at least semi-hard, the annular section having a first surface opposite a second surface and sandwiched between the cap inner surface and the rim wherein the first surface faces the cap top portion inner surface; and

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B<sup>11</sup>  
a groove formed on the first surface extending from the opening, wherein the opening extends through the venting member.

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54. (Amended) A vented bottle cap system comprising:  
a bottle having a neck having a rim defining a mouth;  
a cap having a top portion having an inner surface and an annular wall extending from the top portion, wherein when the cap is capping the bottle neck a gas path is formed between outer surface of the bottle neck and the inner surface of the annular wall;

a venting member having an annular section defining an opening and made of a material being at least semi-hard, the annular section having a first surface opposite a second surface and sandwiched between the cap inner surface and the rim wherein the first surface faces the cap top portion inner surface; and

a groove formed on the first surface extending beyond two locations on the rim, wherein the opening extends through the venting member.

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B<sup>13</sup>  
57. A bottle cap as recited in claim 8 wherein the groove is linear.

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